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10/593,260	07/02/2007	Satoru Sato	DK-US065241	6444

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EXAMINER

BURK, CATHERINE E

ART UNIT	PAPER NUMBER
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3735

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/593,260	Applicant(s) SATO ET AL.	
	Examiner CATHERINE E. BURK	Art Unit 3735	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 1-11 and 30-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :22 November 2006, 7 November 2007, 24 July 2009.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group II, claims 12-29 in the reply filed on June 6th, 2011 is acknowledged.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 15 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 15 recites the limitation "said sleep/arousal introducing unit" in line 3. There is insufficient antecedent basis for this limitation in the claim. This limitation also appears in line 3 of claim 16. Claims 15 and 16 will be examined as depending from claim 13.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 12-14, 25, and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Ehret (US 5006985 A).
7. Claim 12; Ehret discloses a biological rhythm adjustment device comprising an information input unit (figs. 1-4) for inputting a moving schedule (figs. 2-4) and biological

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information (fig. 1b) for a subject moving in accordance with the moving schedule (col. 4, lines 24-57 and col. 5, line 21 - col. 6, line 45). The device also includes a block for setting a sleeping schedule (fig. 5) based on the moving schedule and biological information previously input (figs. 5, 9Ci, 9Cii, 10A and 10B, col. 6, lines 46-48 and col. 7, line 51 - col. 8, line 16).

8. Claim 13; the block for setting a sleeping schedule includes a parameter-setting unit which generates parameters based on the moving schedule and biological information input by a user, and a sleep/arousal introducing unit which sets the sleeping schedule based on the parameters. The parameter-setting unit includes many different subroutines generally shown in figs. 14-22, which calculate many parameters relative to jetlag such as actual time shift, effective time shift, body clock time shift (col. 21, line 1-61), flight time, meal times, and preferred sleep times (col. 21, line 62 - col. 22, line 32). This information is returned to a sleep/arousal introducing unit including subroutines generally shown in figs. 23 and 24. This subroutine outputs the sleep schedule based on all of the parameters calculated by the parameter-setting unit (col. 24, line 30 - col. 25, line 18).

9. Claim 14; Ehret discloses that the sleep time is calculated differently depending on the direction of travel. Phase advances, which occur when flying from west to east, are much harder to adapt to than phase delays, which occur when flying from east to west (col. 20, lines 13-29). In one example, when calculating the time duration of dim light, or rest, the computer determines whether the trip involves phase delay or phase advance. For phase delay, dim light is set to continue for 6 hours after a fixed breakfast time, and for phase delay, the dim light ends and bright light is started from breakfast time (fig. 22). Therefore the sleep time for flying eastward is shorter than for flying westward because dim light does not continue when flying eastward.

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10. Claim 25; the biological information includes a user's preferred sleeping time (or bed time) and sleep duration. Adding the sleep duration to bedtime will give the arousal time (col. 4, lines 41-57). The sleeping schedule is set based on the sleeping and arousal time in the sleep/arousal introducing unit.

11. Claim 28; applicant recites the limitation "said information input unit is provided to a check-in counter for said aircraft". This constitutes an intended use of the claimed system.

Where the system is provided does not change the structure of the system. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

The system disclosed by Ehret is capable of being provided to a check-in counter for the aircraft, therefore it meets the limitations of claim 28.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 15, 17, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehret in view of Lustig (WO 2004/075714 A2).

14. Claims 15 and 17; Ehret discloses many types of stimuli ("zeitgebers") which can be applied to the subject in order to aid in overcoming jetlag (col. 1, lines 40-50) but does not disclose an air conditioner for raising a body temperature. However, Lustig discloses that

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ambient and core body temperature are known factors for influencing sleep architecture and discloses devices for affecting the temperature in proximity of a sleeping person in order to change the person's body temperature and thus influence the person's sleep state. Some of these devices include electric blankets and air conditioners (p. 10, last paragraph - p. 11 first paragraph). These devices could be used to either raise or lower the ambient temperature. It would have been obvious to one of ordinary skill in the art at the time of the invention to include an air conditioning device for raising the ambient temperature around a subject in the system disclosed by Ehret, because Lustig teaches that ambient temperature is one of many factors known to influence a user's sleep state and thus could be one of the zeitgebers applied to the user to overcome jetlag.

15. Claims 20 and 21; Ehret discloses many types of stimuli ("zeitgebers") which can be applied to the subject in order to aid in overcoming jetlag (col. 1, lines 40-50 and col. 24, lines 11-14) and providing instructions to the subject to sleep or relax (figs. 10A-B) but does not disclose a sound output device for relaxing the subject. However, Lustig discloses that relaxing or falling asleep can be aided by producing soothing sounds (p. 14, 2nd full paragraph). A sound output device must be included to produce soothing sounds. It would have been obvious to one of ordinary skill in the art at the time of the invention to include a sound output device for relaxing the user in the system disclosed by Ehret because Lustig teaches that such a device facilitates falling asleep, which would make it easier for the user to follow the instructions to fall asleep generated by Ehret's device.

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16. Claims 15, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehret in view of Brown (US 5658222 A).

17. Claims 15 and 18; Ehret discloses many types of stimuli (“zeitgebers”), including exercise (which is known to raise the body temperature), which can be applied to the subject in order to aid in overcoming jetlag (col. 1, lines 40-50 and col. 24, lines 11-14) but does not disclose specific devices for applying the stimuli, for example exercise equipment. Brown discloses a portable aerobic system which includes exercise equipment which collapses into a briefcase for easy transport (figs. 4 and 8). It would have been obvious to one of ordinary skill in the art at the time of the invention to include a portable exercise system similar to the equipment disclosed by Brown with the system for overcoming jet lag disclosed by Ehret because exercise equipment may not always be available when Ehret’s system recommends the user exercise and Brown’s system can easily be carried with the subject.

18. Claim 19; Ehret’s system gives instructions to the user to perform exercise (col. 24, lines 11-14).

19. Claims 20, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehret in view of Brown as applied to claim 15 above, and further in view of Short (US 4600723 A).

20. Claims 20 and 22; Ehret in view of Brown already disclose a sleep/arousal introducing unit including exercise equipment but are silent as to the exercise equipment being a device relaxing the subject. However, Short discloses that moderate exercise can induce sleep (col. 3, table 1, post-flight adaptation, item 7). Therefore it would have been obvious to one of ordinary

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skill in the art at the time of the invention that the exercise equipment disclosed by Ehret in view of Brown also constitutes a device for relaxing the subject.

21. Claim 23; Ehret's system gives instructions to the user to perform exercise (col. 24, lines 11-14).

22. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ehret in view of Czeisler (US 5163426 A).

23. Ehret discloses that the subject be exposed to either bright or dim light (figs. 9Cii, 10A-B and col. 7, lines 64-65) but is silent as to a device for irradiating light on the subject. However, Czeisler discloses a method of adjusting the circadian rhythm including the step of exposing a subject to periods of bright or dim light. The light can be provided by many different types of commercially available lamps (col. 21, lines 2-10). It would have been obvious to one of ordinary skill in the art at the time of the invention to include a device for irradiating light on the subject in Ehret's system, such as one of the commercially available lamps used in Czeisler's technique, because Ehret disclose that the subject should be exposed to bright light for some periods of time, natural sources of which may not be available at all times such as at night or on a airplane.

24. Claims 20 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehret in view of Russek (US 5395301 A).

25. Claims 20 and 24; Ehret is silent as to the sleep/arousal inducing unit including a massager for relaxing the subject. However, Russek discloses a device for relaxing a user by

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emulating human touch (col. 2, lines 24-27). The device may be used to promote relaxation or sleep (col. 7, lines 39-42). It would have been obvious to one of ordinary skill in the art at the time of the invention to include a massager for helping the subject relax in Ehret's system, similar to the massager taught by Russek, because any device which facilitates falling asleep would make it easier for the user to follow the sleep schedule instructions generated by Ehret's device.

26. Claims 26, 27, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehret in view of Seki (US 6164787 A).

27. Claim 26; Ehret discloses the biological rhythm adjustment device according to claim 13 but is silent as to where the different components of the system are provided. However, Seki discloses a device for adjusting the biological clock of a subject, such as a transcontinental airline traveler. The device includes two components; a luminaire -16- disposed in the airplane seat, and a light source/power control unit -12- located remotely from the luminaire. The power supply unit is located away from the seat so that it can be designed and built without being restrained to cushionable materials (col. 2, lines 1-8 and col. 3, lines 6-11). It would have been obvious to one of ordinary skill in the art at the time of the invention to locate the sleep/arousal introducing unit of Ehret's device in an airplane seat so that the stimuli can be individually provided to the subject on a flight, but to locate the information input unit and parameter-setting unit separately from the seat, similar to the power supply configuration taught by Seki, because it would allow the information input unit and parameter-setting unit, which are computers and

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generally made from hard parts, to be designed and built without having to use flexible or cushionable materials.

28. Claims 27 and 29; applicant recites the limitation "said parameter-setting unit is provided in the crew's cabin in said aircraft" in claim 27 and the limitation "said information input unit is provided to a check-in counter for said aircraft" in claim 29. These constitute intended uses of the claimed system. Ehret in view of Seki already disclose the information input unit and the parameter-setting unit are located away from the sleep/arousal introducing unit. Where the information input unit and parameter-setting unit are provided does not change the structure of the system, just the physical location of the components of the already disclosed system. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. The parameter-setting unit and the information input unit disclosed by Ehret are capable of being provided to a crew's cabin and a check-in counter for the aircraft respectively, therefore Ehret in view of Seki's system meets the limitations of claims 27 and 29.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CATHERINE E. BURK whose telephone number is (571)270-7130. The examiner can normally be reached on Monday-Thursday 9:00 am - 7:00 pm Eastern Time.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on (571) 272-4730. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Charles A. Marmor, II/
Supervisory Patent Examiner
Art Unit 3735

/C. E. B./
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